

Attorney's Docket: 2000DE402D
Serial No.: 10/668,003
Art Unit 1714
Response to Office Action Mailed 03/27/2006

REMARKS

The Office Action mailed March 27, 2006 has been carefully considered together with each of the references cited therein. The amendments and remarks presented herein are believed to be fully responsive to the Office Action. Accordingly, reconsideration of the present Application in view of the following remarks is respectfully requested.

Applicant has amended the claims to attend to housekeeping matters and to more clearly describe the invention. In claim 1, Applicant has expanded the definition of X to include NH and NR³ groups, and added the recitation that component A has from 2 to 5 free hydroxyl groups wherein each carbon atom has no more than one hydroxyl group. The ranges for R¹ in component A, and the structural units of the vinyl esters were amended. Support for this amendment may be found in Applicant's Specification on page 4 at line 12 and lines 16-18, and on page 5, at lines 8-9 and line 12. It is believed that no new matter has been introduced by this amendment.

Claims 1 and 5 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 was amended to restore the nitrogen compounds and the terms NH and NR³. Claim 1 now has proper antecedent basis for the term nitrogen compound recited in claim 5. Therefore, the rejection of claims 1 and 5 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention in view of the above amendments.

Claims 1-4 and 6, 7, 9, and 11 were rejected under 35 U.S.C. 102(b) as being anticipated by DE 19738271 (Equivalent to 6,010,989) in view of EP 493769 (US 5,254,652) and DE 3142955 (US 4,431,565). The '989 patent discloses the use of a terpolymer as disclosed in EP493769 and DE 3142955 (US 4,431,565) discloses the use of alkylphenol-aldehyde resins. However, the DE 19738271 (Equivalent to 6,010,989) reference is silent on any amphiphilic compounds (esters or ethers) having 2 to 5 free hydroxyl groups. It is fundamental that all elements of a claim must be found united in the same way to perform the identical function for a

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reference to establish anticipation. Anticipation is a technical defense which must meet standards: Unless all of the same elements are found in exactly the same situation and united in the same way to perform the identical function in a single prior art reference, there is no anticipation. Unless all of the elements of an claimed invention can be found in a single reference, it cannot be said that such a claim is anticipated by that reference. Therefore, the rejection of claim 1 as amended under 35 U.S.C. §102(b) as being anticipated by DE 19738271 (Equivalent to 6,010,989) in view of EP 493769 (US 5,254,652) and DE 3142955 (US 4,431,565) should be withdrawn for the reason that no where in the 19738271 (Equivalent to 6,010,989) reference is it disclosed that the amphiphilic component has 2 to 5 free hydroxyl groups. The rejection of claims 2-4 and 6, 7, 9, and 11 under 35 U.S.C. §102(b) as being anticipated by DE 19738271 (Equivalent to 6,010,989) in view of EP 493769 (US 5,254,652) and DE 3142955 (US 4,431,565) should be withdrawn for the reasons given in support of claim 1 from which they depend.

Claims 1-4, 6, 7, 9, and 11 were rejected under 35 U.S.C. 103(a) as being unpatentable over CA 2,242,474 in view of EP 680 506. The Canadian reference '474 broadly discloses a flow improver (having 65 to 94 mol-% ethylene, 1-25 mol-% neocarboxylic acid and 5-35 mol-% vinyl acetate) which is not identical to Applicant's terpolymer wherein Applicant's terpolymer has 3 to 18 mol-% of a short chain vinyl ester and from 0.5 to 10 mol-% of neocarboxylic acid vinyl ester. The EP 680506 reference is a broad general reference which states that lubricity additives may be used with any type of additive, but the '506 reference is silent on any impact of such a combination on filterability or lubricity. The examiner argues that it would be obvious to one skilled in the art to include the lubricity additive in the fuel composition because the Canadian reference suggests the need for a lubricity additive. Applicant discovered that it was critical to the instant invention as described at page 3, lines 10-19 of Applicant's Specification that under cold blending conditions with low-sulfur, highly paraffinic oils, that using a conventional fuel oil additive resulted in filtration problems and lubricity problems. Only Applicant's additive combination of the particular amphiphilic component A) and the particular cold flow improver, terpolymer B) as recited in amended claim 1, overcomes these

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problems. As shown in Tables 3-7 of Applicant's Specification, cold flow improver Polymers B-F of the present invention, which contained an ethylene content of from about 85 to 90 mol-%, a vinyl ester content of from about 4 to 13 mol-% of vinyl ester, and a neoester content of from 2 to 6 mole percent unexpectedly did not impact the lubricity, as measured by the WSD, wear scar diameter, compared to conventional cold flow improvers without the neoester content, as exemplified by Polymer A which did impact the lubricity in combinations with a range of oil-soluble amphiphilic compounds 1-6. Furthermore, in Applicant's Specification, at page 37, lines 4-11, Applicant presents the British Rail parameter, ADT, for determining the filterability of a fuel oil in cold weather. A fuel oil having a value greater than 25 is not considered filterable. Referring to Tables 3-7 of Applicant's Specification, those fuel oils treated with the cold flow improver containing Polymers B-F of the present invention, which contained an ethylene content of from about 85 to 90 mol-%, a vinyl ester content of from about 4 to 13 mol-% of vinyl ester, and a neoester content of from 2 to 6 mole percent unexpectedly showed significantly improved (almost 6 times improved) filterability (ADT) over the comparative Polymer A which did not contain any neoester. Nowhere in the Canadian reference, or the combination of the broad disclosure of the cold flow improvers of the Canadian reference and EP-0680506 which discloses terpolymers is the specific combination claimed by the Applicant disclosed. Furthermore, no one skilled in the art, armed with the broad disclosures of either the Canadian reference or the EP reference would be motivated to arrive at applicant's invention. Obvious to try is not the standard of 35 USC 103. The prior art references must be read as a whole. No one skilled in the art would be able to combine any of the teachings of the reference to render the instant invention obvious without the improper use of hindsight. The teachings are to be viewed as they would have been viewed by one of ordinary skill. It is impermissible within the framework of 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary for the full appreciation of what the reference fairly suggests to one skilled in the art. The references all suggest that the additives improve fuel properties. No reference suggests that there are significant differences in performance between some

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compositional ranges of a cold flow additive when combined with a particular lubricity additive when employed in cold blending conditions in low sulfur fuel oils. No one skilled in the art armed with either the Canadian reference or the EP reference would be motivated to select Applicant's particular compounds from the thousands of structures represented by the Canadian and/or EP disclosures. The data provided by the Applicant clearly shows significant cold flow and lubricity advantages to the instant claimed invention. Proceeding contrary to accepted wisdom is strong evidence of unobviousness. Therefore, the rejection of claim 1 as amended under 36 U.S.C. 103(a) as being unpatentable over CA 2,242,474 in view of EP 680 506 should be withdrawn for the reason that the Canadian reference does not disclose the specific combination of Applicant's component A with the lubricity improver component B which as an additive surprisingly improves the cold flow properties of fuel oils without adversely impacting the lubricity of the fuel oil or its filterability. The rejection of claims 2-4, 6, 7, 9 and 11 under 36 U.S.C. 103(a) as being unpatentable over CA 2,242,474 in view of EP 680 506 should be withdrawn for the reasons given in support of claim 1, from which they depend.

Claim 8 was rejected under 35 U.S.C. 103(a) as being unpatentable over CA 2,242,474 in view of EP 680 506 as applied to claims 1-4, 6, 7, 9, and 11, and further in view of Davies (US 6,101,545). The rejection of claim 8 under 35 U.S.C. 103(a) as being unpatentable over CA 2,242,474 in view of EP 680 506 as applied to claims 1-4, 6, 7, 9, and 11, and further in view of Davies (US 6,101,545) should be withdrawn for the reasons given in support of claim 1 above, from which claim 8 depends, and for the reason that the '545 patent does not teach or suggest the particular combination of Applicant's cold flow improver, component A, with the specific terpolymer, component B, as claimed in Applicant's amended claim 1.

Claims 1-9 and 11 were rejected on the of non-statutory obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,652,610. Applicant has herewith provided a Terminal Disclaimer which disclaims the terminal portion of the statutory term of any patent granted on the instant invention which would extend beyond the expiration date of the full statutory term of

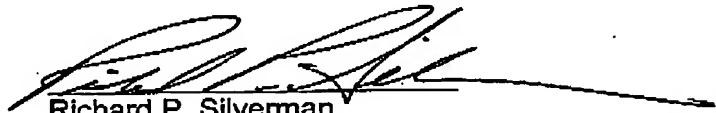
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US Patent 6,652,610, which is commonly owned and the extent of which is the whole of this invention. Therefore the provisional rejection of Claims 1-9 and 11 under the judicially created doctrine of double patenting over the claims of US Patent 6,652,610 should be withdrawn.

Accordingly, favorable reconsideration and an allowance of all pending claims are courteously solicited.

An early and favorable action is courteously solicited.

Respectfully submitted,



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Attachments:
Terminal Disclaimer